

PATENT COOPERATION TREATY

Rec'd PCT/PTT 03 JUN 2005

From: the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year)

21.03.2005

Applicant's or agent's file reference
P61520/001

IMPORTANT NOTIFICATION

International application No.
PCT/GB 03/05311

International filing date (day/month/year)
05.12.2003

Priority date (day/month/year)
05.12.2002

Applicant
EXOSECT LIMITED et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



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29 MAR 2005

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PATENT COOPERATION TREATY

PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P61520/001	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/05311	International filing date (day/month/year) 05.12.2003	Priority date (day/month/year) 05.12.2002
International Patent Classification (IPC) or both national classification and IPC A01N59/16		
Applicant EXOSECT LIMITED et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
 These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 02.07.2004	Date of completion of this report 21.03.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Lamers, W Telephone No. +31 70 340-3713 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/GB 03/05311****I. Basis of the report**

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-14 filed with telefax on 22.02.2005

Drawings, Figures

1-6 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-14
	No: Claims	
Inventive step (IS)	Yes: Claims	1-14
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

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EXAMINATION REPORT - SEPARATE SHEET**

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Re Item I**Basis of the report**

I.5. The amendments filed with the letter date 22.02.2005 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendments concerned is the wording "particles of soft magnetic material" which cannot be found in the application as filed, in particular neither on page 2, lines 10 to 32, nor on page 4, lines 1 to 9. This report has been established as if this amendment had not been made and is based on the wording "particles of ... material, which is capable of becoming magnetically polarized" which is used in claim 1 as originally filed (Rule 70.2c) PCT).

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: WO 00/01236 A (ASHBY ROGER EDWARD ;HOWSE PHILIP EDWIN (GB); UNIV SOUTHAMPTON (GB)) 13 January 2000 (2000-01-13)
- D2: US-A-3 767 783 (FISCHER J ET AL) 23 October 1973 (1973-10-23)
- D3: EP-A-0 118 667 (COATHYLENE SA) 19 September 1984 (1984-09-19)

V.a. Certain observations on the international application

It would appear from some parts of description of the present application that particles, which have been magnetized already before the surface of a pest is exposed to them, are included in the scope of the alleged invention. (see shallow container 1, wherein soft iron particles are held in place by a material with conducting or magnetic properties; see figure 3, showing a dispenser consisting of material with conducting or magnetic properties and

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EXAMINATION REPORT - SEPARATE SHEET**

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being coated with soft iron particles; see example a) wherein the particulate composition is placed onto magnetic material). These parts of the description are in contradiction to the wording of independent claim 1, which explicitly relates to particles which remain unmagnetised until exposed to a field associated with the pest. This inconsistency between the claims and the description leads to doubt concerning the matter for which protection is sought, thereby rendering the claims unclear, Article 6 PCT.

V.b. Novelty

Document D1 discloses methods, compositions and traps related to the ones as presented in the claims of the present application, but differing in that only particles are used which contain or consist wholly of hard magnetic material, thus particles which are permanently magnetised. Soft magnetic materials may only be used if they have been magnetised or become magnetised on admixture with hard magnetic material before they are brought into contact with the pest (see D1: page 2, line 30 - page 4, line 10). As claim 1 relates to particles of soft magnetic material which remains unmagnetised until exposure to the (electric or magnetic) field associated with the pest, the subject matter of this claim it is new over the teaching of D1 (Art. 33(2) PCT).

Document D2 discloses pesticides in particulate formulation, the particles comprising a central core consisting of metallic couples, comprising i.a. iron. The particle size is between 1 and 100 microns, the cores are coated by a layer of polymeric material and the exterior layer comprises various insecticides and acaricides (see D2: col. 2, lines 21 - 62; col. 3, lines 53 - 64, col. 3, line 74 - col. 4, line 12). Document D3 discloses compositions comprising particles with a diameter of less than 50 microns and consisting of iron and polymers, the compositions being sprayed together with powdery insecticides in the form of suspensions (see D3: page 2, line 31 - page 4, line 16; page 6, lines 5 - 14). None of the documents D2 and D3 disclose the method of claim 1 in which the surface of a pest is exposed to the particles, the particles becoming magnetically polarised by the electric or magnetic field associated with the pest and thereby getting attached to the pest.

Hence the subject matter of claim 1 is new (Art. 33(2) PCT). Claims 2-14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty (Art.

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33(2) PCT).

V.c. Inventive Step

Document D1 is regarded as representing the closest prior art to the subject-matter of claim 1, and shows methods, compositions and traps related to the ones as presented in the claims of the present application, but differing in that only particles are used which contain or consist wholly of hard magnetic material, thus particles which are permanently magnetised. Soft magnetic materials may only be used if they have been magnetised or become magnetised on admixture with hard magnetic material before they are brought into contact with the pest (see D1: page 2, line 30 - page 4, line 10).

The subject-matter of claim 1 therefore differs from D1 in that particles of magnetisable material are used which remain unmagnetised until they are exposed to the (electric or magnetic) field associated with the pest and only upon exposure to this field become magnetically polarized and get attached to the pest.

The problem to be solved by the present invention may therefore be regarded as providing particles of other material which become attached to and stay on the surface of pests.

The solution to this problem as proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: Document D1 does not suggest to use unmagnetised material and does not teach the existence of a (electric or magnetic) field associated with the pest, which is able to induce magnetism in an unmagnetised material (which is capable of becoming magnetically polarised) in such a way, that particles of such material become attached to the pest. Furthermore example b) shows the superiority of particles as claimed in terms of retention on the pest over particles of ferrosilicate and strontium ferrite as disclosed in D1.

Claims 2-14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect inventive step (Art. 33(3) PCT).

V.d. Industrial Applicability

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The subject matter of claims 1-14 appears to be industrially applicable (Art. 33(4) PCT).

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**Annexe to the International Preliminary
Examination Report: amended claims
submitted under Article 34 PCT**

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CLAIMS:

1. A method of controlling pests, which method comprises:
providing a particulate composition containing
5 particles of an unmagnetised, soft magnetic material, said
particles being associated with at least one pesticide or
behaviour modifying chemical;
exposing a surface of a pest to said particles, wherein
said particles become magnetically polarized by the electric
10 or magnetic field associated with the pest and become
attached to the pest, and wherein said particles remain
unmagnetised until exposed to the field associated with the
pest.
- 15 2. A method so claimed in claim 1, wherein said particles
comprise metallic iron, nickel or cobalt, or mixtures
thereof.
3. A method as claimed in claim 1 or claim 2, wherein said
20 particles are coated with a material which is a carrier for
the pesticide or behaviour modifying chemical, or coated
directly with the pesticide or behaviour modifying chemical.
4. A method so claimed in claim 3, wherein the carrier
25 comprises a lipid, a resin or a polymer.
5. A method as claimed in claim 4, wherein the lipid is a
fatty acid, or an ester or salt thereof.
- 30 6. A method as claimed in any one of the preceding claims,
wherein said particles have a unit weight corresponding to

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that of a sphere of a diameter in the range of from 0.1 to 50 micrometres.

7. A method as claimed in any one of the preceding claims,
5 wherein the pesticide is an insecticide, acaricide,
fungicide, insect growth regulator or chemosterilant.

8. A method as claimed in any one of claims 1 to 6,
wherein the pesticide is a bacterium, fungus or virus.

10

9. A method as claimed in any one of claims 1 to 6,
wherein the behaviour modifying chemical is a pheromone or
allelochemical.

15 10. A method as claimed in any one of claims 1 to 8,
wherein the pesticide is a chemical or naturally occurring
insecticide or acaricide which comprises up to 10% by weight
of the particulate composition.

20 11. A method as claimed in any one of claims 1 to 6 or
claim 8, wherein the pesticide is a bacterium, fungus or
virus which comprises up to 40% by weight of the particulate
composition.

25 12. A method as claimed in any one of claims 1 to 6 or
claim 9, wherein the behaviour modifying chemical comprises
from 1 picogram to 1 microgram per particle having an
average particle size of from 0.1 to 50 micrometers.

30 13. A method as claimed in any one of the preceding claims,
wherein the pest is lured to a dispenser in which one or
more surfaces is coated with the particulate composition.

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14. A method as claimed in claim 13, wherein the pest is lured to the dispenser by a chemical attractant, biological attractant, food source, light, colour, visual pattern, 5 infra red or acoustic source, or a combination thereof.

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